- (j) Installation test requirements:
- (1) Upon completion of the piping installation, and before the cylinders are connected, a pressure test shall be applied as set forth in this paragraph. Only carbon dioxide or other inert gas shall be used for this test.
- (2) The piping from the cylinders to the stop valves in the manifold shall be subjected to a pressure of 1,000 p.s.i. With no additional gas being introduced to the system, it shall be demonstrated that the leakage of the system is such as not to permit a pressure drop of more than 150 p.s.i. per minute for a 2-minute period.
- (3) The individual branch lines to the various spaces protected shall be subjected to a test similar to that described in the preceding paragraph with the exception that the pressure used shall be 600 p.s.i. in lieu of 1,000 p.s.i. For the purpose of this test, the distribution piping shall be capped within the space protected at the first joint ahead of the nozzles.
- (4) In lieu of the tests prescribed in the preceding paragraphs in this section, small independent systems protecting spaces such as emergency generator rooms, lamp lockers, etc., may be tested by blowing out the piping with air at a pressure of at least 100 p.s.i.

## § 76.15-20 Carbon dioxide storage.

- (a) Except as provided in paragraph (b) of this section, the cylinders shall be located outside the spaces protected, and shall not be located in any space that might be cut off or made inaccessible in the event of a fire in any of the spaces protected.
- (b) Systems of the type indicated in §76.15–5(d), consisting of not more than 300 pounds of carbon dioxide, may have the cylinders located within the space protected. If the cylinder stowage is within the space protected, the system shall be arranged in an approved manner to be automatically operated by a heat actuator within the space in addition to the regular remote and local controls.
- (c) The space containing the cylinders shall be properly ventilated and designed to preclude an anticipated ambient temperature in excess of 130 degrees F.

- (d) Cylinders shall be securely fastened and supported, and, where necessary, protected against injury.
- (e) Cylinders shall be so mounted as to be readily accessible and capable of easy removal for recharging and inspection. Provisions shall be available for weighing the cylinders.
- (f) Where subject to moisture, cylinders shall be so installed as to provide a space of at least 2 inches between the flooring and the bottom of the cylinders.
- (g) Cylinders shall be mounted in an upright position or inclined not more than 30 degrees from the vertical. However, cylinders which are fitted with flexible or bent syphon tubes may be inclined not more than 80 degrees from the vertical.
- (h) Where check valves are not fitted on each independent cylinder discharge, plugs or caps shall be provided for closing outlets when cylinders are removed for inspection or refilling.
- (i) All cylinders used for storing carbon dioxide must be fabricated, tested, and marked in accordance with §§ 147.60 and 147.65 of this chapter.

[CGFR 65-50, 30 FR 16940, Dec. 30, 1965, as amended by CGD 84-044, 53 FR 7748, Mar. 10, 1988; USCG-1999-6216, 64 FR 53226, Oct. 1, 1999]

## § 76.15-25 Discharge outlets.

- (a) Discharge outlets shall be of an approved type.
  - (b) [Reserved]

## § 76.15-30 Alarms.

(a) Spaces which are protected by a carbon dioxide extinguishing system and are normally accessible to persons on board while the vessel is being navigated, other than paint and lamp lockers and similar small spaces, shall be fitted with an approved audible alarm in such spaces which will be automatically sounded when the carbon dioxide is admitted to the space. The alarm shall be conspicuously and centrally located and shall be marked as required by §78.47-9 of this subchapter. For systems installed on or after July 1, 1957, alarms will be mandatory only for systems required to be fitted with a delayed discharge. Such alarms shall be so arranged as to sound during the 20 second delay period prior to the discharge of carbon dioxide into the space,